



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION:	PW4168-1D	BYPASS RATIO:	4.9
UNIQUE ID NUMBER:	9PW093	PRESSURE RATIO ( $\pi_{00}$ ):	33.1
COMBUSTOR:	Talon IIB		
ENGINE TYPE:	TF	RATED THRUST ( $F_{00}$ ) (kN):	305.1

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	1.9	24.7	56.3	7.5
AS % OF ORIGINAL LIMIT	9.9	20.9	53.0	42.8
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			66.2	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			76.8	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			86.3	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			100.0	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.937	0.00	0.17	30.15	5.7
CLIMB OUT	85	2.2	2.398	0.00	0.18	22.31	5.5
APPROACH	30	4.0	0.818	0.05	1.26	12.39	0.2
IDLE	7	26.0	0.252	0.95	14.78	4.08	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1029	385	6131	14812	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				1.3	20.1	48.5	5.8
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION	0	(kW)	AT	-	POWER SETTINGS
STAGE BLEED	0	(% CORE FLOW)	AT	-	POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.8-101.4
TEMPERATURE (K)	282-285.6
ABS HUMIDITY (kg/kg)	0.00362-0.00455

### FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	17

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: Pratt & Whitney  
 TEST LOCATION: East Hartford, CT  
 TEST DATES: 12/05/2008-13/05/2008

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Talon IIB combustor with improved exit temperature profile.

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)